भारतीय मानक Indian Standard

बर्फी — विशिष्टि

IS 5550: 2023

(पहला पुनरीक्षण)

Burfi — Specification

(First Revision)

ICS 67.100.10

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भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Dairy Products and Equipment Sectional Committee had been approved by the Food and Agriculture Division Council.

Burfi is a popular milk-based confection prepared from milk. It is a highly nutritious product as it normally contains considerable amounts of milk solids. Several varieties of Burfi are sold in the market under different names, for example, Plain Burfi, Fruit Burfi, Chocolate Burfi, Doda Burfi, Coconut Burfi and Rava Burfi, depending on the special ingredients or processing aids/techniques used in the preparation of the product. The base for all types of Burfi is, however, Khoa (desiccated whole milk) and sugar (sucrose) in different proportion. Other ingredients like coconut, Pista, other nuts, fruits and Rava are incorporated into the product to cater to special tastes.

The important steps in the preparation of *Burfi* are: desiccation of milk into *Khoa* of different consistencies, incorporation of sugar either in the crystalline form or as syrup, admixture of other ingredients, and subsequent desiccation to get the desired body and texture (soft, semi-hard or hard) characteristic of the variety. The permitted colouring and flavouring materials, may be added in the initial and final stages of preparation, respectively. The product, while still hot and possessing a semi-solid consistency, is poured on to previously prepared moulds and cooled either rapidly or over a period of time to get the desired body (coarse or fine grained). After cooling, the mass is cut into pieces of required size and shape and packed.

Burfi retains its quality for a considerable length of time at atmospheric storage temperature due to its low moisture content and high sugar concentration. The method of preparation also ensures the destruction of almost all micro-organisms present in the raw material but there is much scope for post-manufacture contamination from undesirable micro-organisms depending on the methods of handling, packaging and storage. This standard was originally published in 1970. This revision has been brought out to incorporate the following major changes:

- a) Requirements for physical characteristics of the Burfi have been updated;
- b) Doda Burfi has been incorporated as one of the types of Burfi;
- c) Requirements of minimum fat content and maximum sucrose content have been modified;
- d) Microbiological requirements have been aligned with the *Food Safety and Standards (Food Products Standards and Food Additives) Regulations*, 2011; and
- e) Methods of test and sampling have been updated.

In the formulation of this standard, due consideration has been given to the provisions of the *Food Safety and Standards Act*, 2006 and the Rules and Regulations framed thereunder and the *Legal Metrology (Packaged Commodities) Rules*, 2011. However, this standard is subject to the restrictions imposed under these, wherever applicable.

The composition of the committee responsible for formulation of the standard is listed in Annex C.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

BURFI — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for different varieties of *Burfi* prepared from milk, *Khoa* or *Mawa*, with or without addition of milk solids and non-dairy ingredients.

2 REFERENCES

The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

3 TYPES

- **3.1** The different varieties of *Burfi* sold in the market may be classified into the following main types:
 - a) Plain *Burfi* containing mainly *Khoa* and sugar with or without added permitted colouring and flavouring materials;
 - b) Fruit, nut, chocolate *Burfi* containing *Khoa*, sugar and the special ingredients such as fruits, nuts, chocolates and cocoa powder, singly or in combination:
 - c) *Rava Burfi*, containing *Khoa*, sugar and *Rava* together with permitted flavouring or colouring material; and
 - d) *Doda Burfi*, containing mainly *Khoa*, *Ghee* and other non-dairy ingredients such as dried fruits and nuts, cereals and spices singly or in combination, with permitted flavouring or colouring materials.

4 INGREDIENTS

- **4.1** The ingredients used for the preparation of *Burfi* shall conform to the requirements specified in **4.1.1** to **4.1.9**.
- **4.1.1** The *Khoa* used shall comply with the requirements prescribed in IS 4883.

- **4.1.2** The sugar shall conform to IS 1151.
- **4.1.3** *Ghee*, if used in the preparation of *Burfi* shall conform to IS 16326.
- **4.1.4** The *Rava* used for the preparation of *Rava Burfi* shall conform to IS 1010.
- **4.1.5** Where coconut is used it should be desiccated, shredded and be free from undesirable flavours, surface discolorations and other defects (*see* IS 966).
- **4.1.6** Crystallized or dried fruits and nuts used should be of good quality and comply with the specifications laid down in the *Food Safety and Standards (Food Products Standards and Food Additives) Regulations*, 2011.
- **4.1.7** If fruit juices are added, they may be fresh, canned or concentrated and they shall conform to the requirements of the *Food Safety and Standards* (*Food Products Standards and Food Additives*) Regulations, 2011.
- **4.1.8** Chocolate or cocoa powder (*see* IS 1164) shall be of good quality and shall be stored in a clean, cool place.
- **4.1.9** The product may contain permitted food additives within the limits as specified under the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.

5 REQUIREMENTS

5.1 Body and Texture

The body of the product may range from very loosely compacted to closely knit. The texture of the product shall be smooth to granular.

5.2 Colour and Flavour

The colour of the product may vary depending on the ingredients and permitted colours used during the manufacture. The flavor of the product shall be pleasant, free from rancidity and bitterness and other off-flavours.

5.3 The product shall also conform to the requirements given in Table 1 and Table 2.

Table 1 Requirements for *Burfi* (*Clause* 5.3)

Sl No.	Characteristic	Requi	Method of Test, Ref	
		Plain <i>Burfi</i>	Other Types	to
(1)	(2)	(3)	(4)	(5)
i)	Moisture, percent by mass, Max	15.0	15.0	Annex A of IS 10484
ii)	Milk fat, percent by mass, Min	15.0	12.0	IS 12758
iii)	Total reducing sugars (including lactose)	15.0	12.0	13 of IS 1479 (Part II)
iv)	Sucrose, percent by mass, <i>Max</i>	40.0	35.0	Annex B of IS 4079
v)	Acidity, percent (as lactic acid), Max	0.35	0.45	Annex B of IS 4883

 $\begin{tabular}{ll} \textbf{Table 2 Microbiological Requirements for } \textit{Burfi} \\ & (\textit{Clause 5.3}) \end{tabular}$

Sl No.		Requirement				Method of Test,	
		Samp	Sampling Plan Limit		(cfu)	Ref to	
		n	c	m	M		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
i)	Aerobic plate count	5	3	$2.5 \times 10^4/g$	$7.5 \times 10^4/g$	IS 5402 (Part 1* or Part 2)	
ii)	Coliform count	5	2	50/g	$1 \times 10^2/g$	IS 5401 (Part 1)	
iii)	Staphylococcus aureus (Coagulase positive)	5	3	10/g	$1 \times 10^2/g$	IS 5887 (Part 8/ Sec 1* or Sec 2)	
iv)	Yeast and mould count	5	3	10/g	50/g	IS 16069 (Part 1)	
v)	Escherichia coli	5	0	<10/g	. –	IS 5887 (Part 1)	
v)	Salmonella sp.	5	0	Absent/25 g	-	IS 5887 (Part 3/ Sec 1)	
vi)	Listeria monocytogenes	5	0	Absent/g	_	IS 14988 (Part 1)	

For sampling plan, see Annex B.
 In case of dispute, the method indicated by '*' shall be the referee method.
 The requirement for Salmonella shall be tested in a laboratory situated away from the production area.

- **5.4** The heavy metals, pesticide residues, antibiotic and veterinary drug residues, toxic substances (melamine) and other contaminants, if any, in the raw materials used in the manufacture of the product shall not exceed the limits as prescribed in the *Food Safety and Standards (Contaminants, Toxins and Residues) Regulations*, 2011.
- **5.5** The product shall be processed and packed in the premises maintained under hygienic condition (*see* IS 2491). It shall also be stored and distributed under hygienic condition.
- **5.6** The cleaning and sterilization of equipment used shall be carried as per IS 5253.

6 PACKING AND MARKING

6.1 Packing

The product, after it is cut into pieces of the required size and shape shall be with or without individual wrapping, packed in paper-board containers or tinplate containers having inner lining of parchment or packed in board cartons lined on the inside with fat and moisture-proof parchment paper or high density polyethylene (HDPE) containers or low density polyethylene (LDPE) containers or other containers made of food grade packaging materials.

6.2 Marking

The following information shall be marked legibly

and indelibly on each container:

- a) Name and type of the product;
- b) List of the ingredients in the descending order:
- c) Name and address of the manufacturer;
- d) Batch or code number;
- e) Month and year of manufacturing or packing;
- f) Net quantity;
- g) Direction for storage;
- h) Expiry/use by (date, month & year); and
- j) Any other requirements under the *Food Safety and Standards (Labelling and Display) Regulations*, 2020 and the *Legal Metrology Act*, 2009 and Rules framed thereunder.

6.2.1 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark

7 SAMPLING

Representative samples of the material shall be drawn as prescribed in IS 11546.

ANNEX A (Clause 2)

LIST OF REFERRED STANDARDS

IS No.	Title	IS No.	Title	
IS 966 : 1999	Desiccated coconut — Specification (second revision)		enumeration of Escherichia coli (first revision);	
IS 1010 : 1968	Specification for <i>suji</i> or <i>rava</i> (semolina) (<i>first revision</i>)	(Part 3/Sec 1) : 2020/ISO 6579-1 : 2017	Horizontal method for the detection, enumeration and serotyping of <i>Salmonella</i> , Section 1 Detection of	
IS 1164 : 1986	Specification for cocoa powder (third revision)		Salmonella spp. (third revision);	
IS 1479 (Part 2): 1961	Methods of test for dairy industry: Part 1 Chemical analysis of milk	(Part 8/Sec 1) : 2002/ISO 6888-1: 1999	Horizontal method for enumeration of coagulase- positive Staphylococci (Staphylococcus aureus and	
IS 2491 : 2013	Food hygiene — General principles — Code of practice (third revision)		Other Species), Section 1 Technique using Baird- Parker agar medium;	
IS 4079 : 2023	Packed Rasogolla — Specification (first revision)	(Part 8/Sec 2): 2002/ISO 6888-2:1999	Horizontal method for enumeration of coagulase — Positive (Staphylococcus aureus and Other Species), Section 2 Technique using rabbit plasma fibrinogen agar medium	
IS 4883 : 2023	Khoa — Specification (second revision)			
IS 5253 : 1969	Guidelines for cleaning and sterilizing dairy equipment	XG 10404 2021		
IS 5401 (Part 1): 2012/ISO 4832:	Microbiology of food and animal feeding stuffs —	IS 10484 : 2021	Paneer — Specification (first revision)	
2006	Horizontal method for the detection and enumeration of coliforms: Part 1 Colony count technique (second	IS 11546 : 2012/ISO 707 : 2008	Milk and milk products — Guidance on sampling (second revision)	
	revision)	IS 11764 : 2005/ISO 2911 :	Sweetened condensed milk – – Determination of sucrose	
IS 5402	Microbiology of the food chain — Horizontal method for the enumeration of	2004	content — Polarimetric method (first revision)	
	microorganisms:	IS 12333 : 2017/ISO 6731 :	Milk, cream and evaporated milk — Determination of	
(Part 1) : 2021/ISO 4833-1: 2013	Colony count at 30 °C by the pour plate technique (<i>third revision</i>);	2010	total solids content (reference method) (second revision)	
(Part 2) : 2021/ISO 4833-2: 2013	Colony count at 30 °C by the surface plating technique (third revision)	IS 12758 : 2005/ISO 1735 : 2004	Cheese and processed cheese products — Determination of fat content — Gravimetric method (reference method) (first revision)	
IS 5887	Methods for detection of bacteria responsible for food poisoning:	IS 13688 : 2020	Packaged pasteurized milk — Specification (second revision)	
(Part 1): 1976	Isolation, identification and		revision	

IS No. TitleIS No. TitleIS 14988 (Part 1) Microbiology of the food horizontal method for the chain — Horizontal method : 2020/ISO enumeration of yeasts and 11290-1:2017 detection technique in products with of Listeria activity enumeration greater than 0.95 monocytogenes and of Listeria spp.: Part 1 Detection method (*first revision*) IS 16326: 2015 Ghee — Specification Microbiology of food and animal feeding stuffs — moulds: Part 1 Colony count IS 16069 (Part 1) 2013/ISO 21527-1:2008

ANNEX B (Table 2)

SAMPLING PLAN FOR MICROBIOLOGICAL REQUIREMENTS

B–1 SAMPLING PLAN FOR MICROBIOLOGICAL REQUIREMENTS	sampling plan and between m and M for 3-class sampling plan;
The terms n , c , m and M used in this standard have the following meaning:	 m = Microbiological limit that separates unsatisfactory from satisfactory in a 2-class sampling plan or acceptable from satisfactory in a 3-class
n = Number of units comprising a sample;	sampling plan; and
c = Maximum allowable number of units having microbiological counts above m for 2-class	 M = Microbiological limit that separates unsatisfactory from satisfactory in a 3-class sampling plan.

B-2 INTERPRETATION OF RESULTS

2-Class Sampling Plan (where n, c and m are specified)	3-Class Sampling Plan (where n, c, m and M are specified)
1) Satisfactory, if all the values observed are $\leq m$	1) Satisfactory, if all the values observed are $\leq m$
2) Unsatisfactory, if one or more of the values observed are > <i>m</i> or more than c values are > <i>m</i>	2) Acceptable, if a maximum of <i>c</i> values are between <i>m</i> and <i>M</i> and the rest of the values are observed as ≤ <i>m</i>
	3) Unsatisfactory, if one or more of the values observed are $> M$ or more than c values are $> m$

ANNEX C

(Foreword)

COMMITTEE COMPOSITIONDairy Products and Equipment Sectional Committee, FAD 19

Organization	Representative(s)
National Dairy Research Institute, Karnal	DR DHEER SINGH (<i>Chairperson</i>) DR MANMOHAN SINGH CHAUHAN (<i>Former Chairperson</i>)
All India Food Processors Association, New Delhi	Dr K. L. Gaba Shri Vijay Gaur (<i>Alternate</i>)
Bihar State Cooperative Milk Producers Federation Ltd, (COMPFED), Patna	SHRI SUSHIL KUMAR SHRI RUPESH RAJ (<i>Alternate</i>)
Centre for Analysis and Learning in Livestock and Food (CALF), Anand	DR RAJESH NAIR DR RAJEEV CHAWLA (Alternate)
Confederation of Indian Food Trade & Industry, New Delhi	MS VARSHA YADAV DR ANIRUDHA CHHONKAR (<i>Alternate</i>)
Confederation of Indian Industry, New Delhi	MS NEHA AGGARWAL MS ARTI GUPTA (Alternate)
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Envirocare Labs Pvt Ltd, Thane	SHRI NILESH AMRITKAR MS PRITI AMRITKAR (<i>Alternate</i>)
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Food Safety and Standards Authority of India, New Delhi	Dr Monica Puniya
Gujarat Cooperative Milk Marketing Federation Ltd, Anand	SHRI SAMEER SAXENA SHRI SAYAN BANERJEE (Alternate)
Indian Dairy Association, New Delhi	DR G. S. RAJORHIA DR SATISH KULKARNI (Alternate)
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IDMC Ltd, Anand	SHRI DEVENDER GUPTA SHRI PRAKASH MAHESHWARI (Alternate)
Jupitor Glass Works, New Delhi	SHRI KARAN NANGIA SHRI AMREEK SINGH PURI (<i>Alternate</i>)
Ministry of Fisheries, Animal Husbandry and Dairying, Department of Animal Husbandry and Dairying, New Delhi	SHRI GOUTAM KUMAR DEB SHRI AJIT KUMAR K. (<i>Alternate</i>)
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